

WHAT IS CLAIMED IS:

1. A method for manufacturing a piezoelectric film type actuator having a piezoelectric film and an oscillating plate structural member bonded therefor comprising the following steps of:

forming a piezoelectric film on an intermediate transfer member;

bonding the piezoelectric film on said intermediate member and said oscillating plate structural member; and

peeling off said intermediate transfer member from said piezoelectric film.

2. A method for manufacturing a piezoelectric film type actuator according to Claim 1, wherein said piezoelectric film contains lead, titanium, and zirconium.

3. A method for manufacturing a piezoelectric film type actuator according to Claim 1, wherein said piezoelectric film is patterned.

4. A method for manufacturing a piezoelectric film type actuator according to Claim 1, wherein the surface roughness Ra of said piezoelectric film is 0.01 μm to 2.5 μm .

5. A method for manufacturing a piezoelectric film type actuator according to Claim 1, wherein in the step of bonding the piezoelectric film and the oscillating plate structural member, said piezoelectric film and said oscillating plate structural member are bonded by means of energized heating, low temperature heating, or energized contact under pressure through single metal, alloy, metal oxide, metal nitride, or metallic compound.

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6. A method for manufacturing a piezoelectric film type actuator according to Claim 1, wherein in the step of peeling off the intermediate transfer member from the piezoelectric film, said intermediate transfer member is peeled off by the irradiation of laser beam from the intermediate transfer member side.

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7. A method for manufacturing a piezoelectric film type actuator according to Claim 6, wherein said laser beam is an excimer laser beam.

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8. A method for manufacturing a piezoelectric film type actuator according to Claim 6, wherein said laser beam is an infrared laser beam.

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9. A method for manufacturing a piezoelectric film type actuator according to Claim 7, wherein the

transmissivity of 230 to 260 nm wavelength of said intermediate transfer member is 20% or more.

10. A method for manufacturing a piezoelectric film type actuator according to Claim 8, wherein the transmissivity of 700 nm to 1,250 nm wavelength of said intermediate transfer member is 20% or more.

11. A method for manufacturing a piezoelectric film type actuator according to Claim 1, wherein in the step of peeling off an intermediate transfer member from a piezoelectric film, a fluid flux is discharged between the intermediate transfer member and the piezoelectric film to peel off said intermediate transfer member.

12. A method for manufacturing a piezoelectric film type actuator according to Claim 1, wherein a porous layer is formed between the intermediate transfer member and the piezoelectric film.

13. A method for manufacturing a piezoelectric film type actuator according to Claim 12, wherein said porous layer contains metal oxide.

14. A piezoelectric film type actuator manufactured by the method for manufacturing a

piezoelectric film type actuator according to Claim 1.

15. A method for manufacturing a liquid discharge head provided with a base plate portion having liquid discharge ports; liquid chambers connected with said liquid discharge ports; and a piezoelectric film type actuator formed by a piezoelectric film and a oscillating plate provided for a part of said liquid chambers, for discharging liquid from the liquid discharge ports by means of the flexural oscillation of said piezoelectric film type actuator, comprising the following steps of:

forming a piezoelectric film on an intermediate transfer member;

bonding the piezoelectric film on said intermediate member and said oscillating plate structural member; and

peeling off said intermediate transfer member from said piezoelectric film.

16. A method for manufacturing a liquid discharge head according to Claim 15, wherein said piezoelectric film contains lead, titanium, and zirconium.

17. A method for manufacturing a liquid discharge head according to Claim 15, wherein said piezoelectric film is patterned.

18. A method for manufacturing a liquid discharge head according to Claim 15, wherein the surface roughness Ra of said piezoelectric film is 0.01 μm to 2.5 μm .

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19. A method for manufacturing a liquid discharge head according to Claim 15, wherein in the step of bonding the piezoelectric film and the oscillating plate structural member, said piezoelectric film and said oscillating plate structural member are bonded by means of energized heating, low temperature heating, or energized contact under pressure through single metal, alloy, metal oxide, metal nitride, or metallic compound.

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20. A method for manufacturing a liquid discharge head according to Claim 15, wherein in the step of peeling off the intermediate transfer member from the piezoelectric film, said intermediate transfer member is peeled off by the irradiation of laser beam from the intermediate transfer member side.

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21. A method for manufacturing a liquid discharge head according to Claim 20, wherein said laser beam is excimer laser beam.

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22. A method for manufacturing a liquid discharge

head according to Claim 20, wherein said laser beam is infrared laser beam.

23. A method for manufacturing a liquid discharge
5 head according to Claim 21, wherein the transmissivity
of 230 to 260 nm wavelength of said intermediate
transfer member is 20% or more.

24. A method for manufacturing a liquid discharge
10 head according to Claim 22, wherein the transmissivity
of 700 nm to 1,250 nm wavelength of said intermediate
transfer member is 20% or more.

25. A method for manufacturing a liquid discharge
15 head according to Claim 15, wherein in the step of
peeling off an intermediate transfer member from a
piezoelectric film, a fluid flux is discharged between
the intermediate transfer member and the piezoelectric
film to peel off said intermediate transfer member.

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26. A method for manufacturing a liquid discharge
head according to Claim 15, wherein a porous layer is
formed between the intermediate transfer member and the
piezoelectric film.

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27. A method for manufacturing a liquid discharge
head according to Claim 26, wherein said porous layer

28. A liquid discharge head manufactured by the method for manufacturing a liquid discharge head according to Claim 15.

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